

need amplification not just by biotin

Amplification of fluorescent in situ hybridisation signals in formalin fixed paraffin wax embedded sections of colon tumour using biotinylated tyramide.

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Fluorescent in situ hybridisation (**FISH**) is a powerful tool for the evaluation of chromosomal alterations in formalin fixed paraffin wax embedded sections of colorectal cancer. However, initial experiments using a two-step detection system for digoxigenin labelled chromosome specific centromeric probes resulted in a complete lack of hybridisation signal from a number of colorectal tumour sections. This was due to high levels of background autofluorescence observed in this tissue, which masked any relatively weak hybridisations present. To overcome this **problem**, a biotinylated tyramide mediated amplification system was incorporated into the **FISH** detection protocol. This involves the use of horseradish peroxidase to activate the biotinylated tyramide, resulting in the deposition of a large number of biotin molecules at the site of bound peroxidase, which corresponds directly to the location of hybridised probe. Final detection was by means of a streptavidin-FITC conjugate. Using this technique, a panel of 11 colorectal tumour samples studied to date have shown strong, specific hybridisation signals to the nucleus of tumour cells. Amplification of **FISH** signals by biotinylated tyramide has the potential to improve weak hybridisation signals in cells from numerous sources, using a variety of probe types, including single **copy gene** probes as well as centromere specific probes.

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Descriptors: *Biotin--analogs and derivatives--AA; *Colonic Neoplasms--genetics--GE; *In Situ **Hybridization** , Fluorescence--methods--MT; *Tyramine--analogs and derivatives--AA

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Biomarkers for prediction of sensitivity to EGFR inhibitors in non-small

cell lung cancer

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Set	Items	Description
S1	401474	FISH
S2	448613	HYBRIDIZ?
S3	40905	S1 AND S2
S4	744123	PROBLEM
S5	368	S3 AND S4
S6	1134936	REVIEW
S7	26	S5 AND S6
S8	26098	CYTOGENETICS
S9	4	S7 AND S8
S10	2	RD (unique items)
S11	5095	SENSITIVITY(2N) LEVEL
S12	13	S3 AND S11
S13	10	RD (unique items)
? s gene(2n)(amplication or copy)		
	2790506	GENE
	411	AMPLICATION
	116711	COPY
S14	12912	GENE(2N) (AMPLICATION OR COPY)
? s s3 and s14		
	40905	S3
	12912	S14
S15	535	S3 AND S14
? s s15 and s4		
	535	S15
	744123	S4
S16	8	S15 AND S4
? rd		

French multi-centric study of 2000 amniotic fluid interphase FISH analyses from high-risk pregnancies and review of the literature.

Luquet I; Mugneret F; Athis P D; Nadal N; Favre B; Abel C; Chelloug N; Lespinasse J; Portnoi M F; Joye N; Dupont J M; Lebbar A; Bresson J L; Fellmann F; Siffroi J P; Chantot-Bastaraut S; Chiesa J; Amblard F; Devillard F; Jeandidier E; Boceno M; Rival J M; Bellec V; Lallaoui H; Delobel B; Croquette M F; Benzacken B

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This prospective and multi-centric study confirms the accuracy and the limitations of interphase **FISH** and shows that any **cytogenetics** laboratory can perform this technique. With regard to the technical approach, we think that slides must be examined by two investigators, because the scoring may be subjective. The main **problem** with the AneuVysion kit concerns the alpha satellite probes, and especially the chromosome 18 probe, which is sometimes very difficult to interpret because of the high variability of the size of the spots, and this may lead to false negative and uninformative cases. The best solution would be to replace these probes by locus-specific probes. Concerning clinical management, we offer interphase **FISH** only in very high-risk pregnancies or/and at late gestational age because of the cost of the test. We think that an aberrant **FISH** result can be used for a clinical decision when it is associated with a corresponding abnormal ultrasound scan. In other cases, most of the time, we prefer to wait for the standard karyotype.

French multi-centric study of 2000 amniotic fluid interphase FISH analyses from high-risk pregnancies and review of the literature.

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Descriptors: *Amniotic Fluid--cytology--CY; *Aneuploidy; *Chromosome Aberrations; *In Situ **Hybridization** , Fluorescence; *Interphase

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Cytogenetic and molecular cytogenetic analysis of B cell chronic lymphocytic leukemia: Specific chromosome aberrations identify prognostic subgroups of patients and point to loci of candidate genes

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